"A Whole New Perspective on How the Body Fits Together" – An Evaluation of a Cadaver Lab Experience for High School and Undergraduate Students

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INDIANA UNIVERSITY SCHOOL OF MEDICINE

INTRODUCTION

The public's anatomical literacy is severely lacking, which can impact an individual's:

- Understanding of their own body [1]
- Ability to make informed health decisions [1]
- Future success in a healthcare career [2]

Educational outreach initiatives for adolescents can improve early anatomical literacy and encourage interest in healthcare careers.[1]

Since 2014, the Center for Anatomy and Physiology Education (CAPE) has hosted interactive cadaver lab tours in which local students can observe and interact with human anatomy on prosections and isolated organs.

Aim: Evaluate students' perceptions of the anatomy lab tours and their impact on students' interests in healthcare careers.

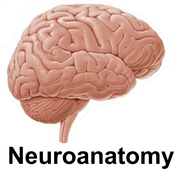
METHODS

- This study was granted exempt status from the IRB at Indiana University (#1802755251).

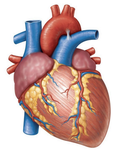
High School and Undergraduate Students (n=261) → Pre-Survey (paper, 4 Q's) → Lecture and Lab Tour → Post-Survey (RedCap, 4 Q's) → Data Analysis

- **Tour Activities include hands-on experiences with**:

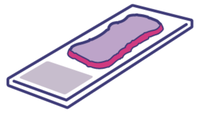
Historical Anatomy



Neuroanatomy



Gross Anatomy



Pathology

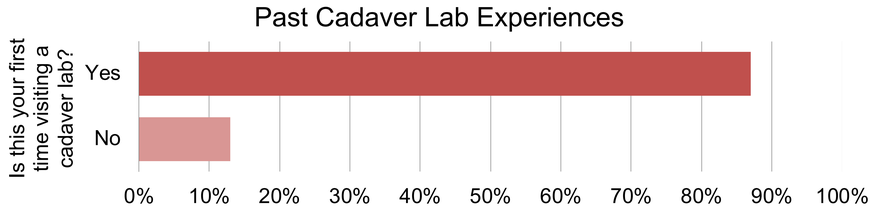
Comparative Anatomy

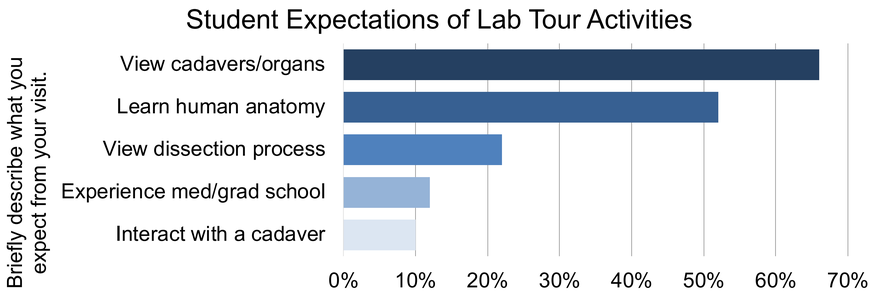
- **Thematic Analysis**: Survey responses were aggregated into pre- and post-tour groups and manually reviewed for recurring themes regarding past experiences with cadaver labs, tour expectations, career interests, and thoughts and feelings about the lab tour.

RESULTS

Pre-Tour Survey

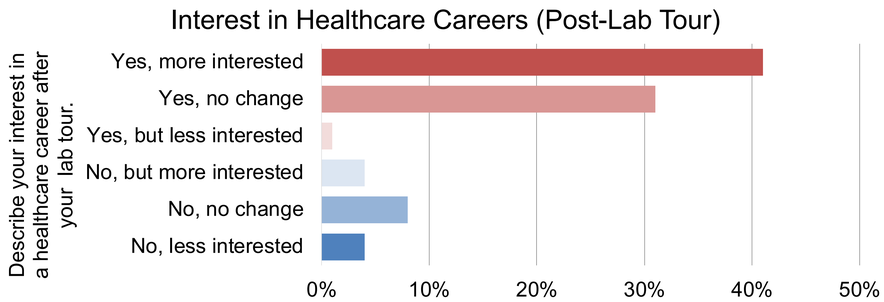
- A total of 261 students (100%) completed the pre-tour survey

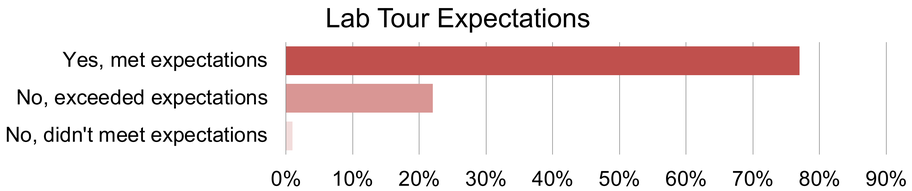




Post-Tour Survey

- A total of 204 students (78%) completed the post-tour survey





"I did not expect that I would be able to actually touch the cadavers and explore the different parts of the human body. Although I was a little scared to, it was extremely interesting and very cool experience."

"I was genuinely surprised by the appearance of different organs. Prior to the visit, I had only seen the different organs through diagrams and models and believed that the heart was about the size of a knuckle and the brain the size of two. However, I was surprised when I actually saw the brain and heart."

DISCUSSION

- IU-CAPE provided visiting high school and undergraduate students with novel, cadaver lab experience that met or exceeded student expectations.
- Most students perceived the cadaver lab tours as engaging, educational, and interactive experiences that improved their anatomical knowledge.
- Students were most surprised by the opportunity to interact with the cadaver and the morphological features of the cadavers and isolated organs.
- Most students also expressed that the lab tours reinforced or increased their interest in health care careers.

REFERENCES

1. Taylor AM, Diggle P, Wessels Q. 2018. What do the public know about anatomy? Anatomy education to the public and the implications. Anatomical Sciences Education 11:117-123.
2. Anderton R, Evans T, Chivers P. 2016. Predicting Academic Success of Health Science Students for First Year Anatomy and Physiology. International Journal of Higher Education 5:250.

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